UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/587,239	07/26/2006	Hiroshi Saito	056937-0243	8551

53080   7590   04/06/2009
MCDERMOTT WILL & EMERY LLP
600 13TH STREET, NW
WASHINGTON, DC 20005-3096

EXAMINER
SONG, JASMINE

ART UNIT	PAPER NUMBER
2188	

MAIL DATE	DELIVERY MODE
04/06/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Office Action Summary	10/587,239	SAITO ET AL.
	Examiner	**Art Unit**	
	JASMINE SONG	2188	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>26 July 2006</u>.
2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-18</u> is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) <u>1-18</u> is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☒ The drawing(s) filed on <u>26 July 2006</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a)☒ All b)☐ Some * c)☐ None of:
      1.☒ Certified copies of the priority documents have been received.
      2.☐ Certified copies of the priority documents have been received in Application No. _____.
      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date <u>07/26/2006,11/13/2007,08/08/2008 and 03/24/2009</u>.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Detailed Action

Specification

The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Drawings

The drawings filed on 07/26/2006 have been approved by the Examiner.

Oath/Declaration

The applicant's oath/declaration has been reviewed by the examiner and is found to conform to the requirements prescribed in 37 C.F.R. 1.63.

Information Disclosure Statement

The information disclosure statement (IDS) submitted on 07/26/2006, 11/13/2007, 08/08/2008 and 03/24/2009 (except the references being lined through since there are no English translation) is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-18 are rejected under 35 U.S.C. 102(e) as being anticipated by Rich., US 7,054,790 B1.

Regarding claim 1, Rich teaches a data accessing apparatus for writing/reading data to a recording medium in which the data is written per data size that can be increased and decreased stepwise (it is taught as varying number of data streams col.4, lines 10 and col.7, lines 25-39), a data transfer efficiency at writing the data is variable depending on the data size (col.7,lines 35-49), and a parameter showing the data transfer efficiency at writing the data per the data size is recorded (col.7, lines 25-52), comprising:

a device for issuing a parameter acquisition command to the recording medium (it is taught as issuing a transfer operation such as a read/write command specified in the selected access pattern to the disk drive);

a device for selecting an optimum data size at writing the data by collating the parameter transmitted by the recording medium which received the parameter acquisition command with the data transfer efficiency required in the data to be written/read by the data accessing apparatus (it is taught as determining a required size

value for a buffer per data transfer rate whereby the disk drive can properly stream data

according to each data transfer rate via the corresponding buffer and an adjustable

virtual buffer size is selected for according transfer rate per access pattern; col.5, lines

36 to col.6, lines 22); and

a device for writing/reading the data with respect to the recording medium based

on the selected optimum data size (col.5, lines 36-58).

Regarding claim 2, Rich teaches the data is written in/read from per the data size

that can be increased and decreased stepwise by the data access apparatus of claim 1,

comprising: a memory unit in which the parameter is recorded (it is taught as log the

parameter results in a log file); and a device for reading the parameter memorized in the

memory unit in response to reception of the parameter acquisition command transmitted

by the data accessing apparatus and transmitting the read parameter to the data

accessing apparatus (col.7, lines 53-60 and col.9, lines 51-67).

Regarding claim 3, Rich teaches the parameter is a table in which the data size

and an information on a length of time required for writing/reading the data to the

recording medium based on the data size are corresponding to each other (col.10, lines

14-26 and col.11, lines 23-55).

Regarding claim 4, Rich teaches the recording medium is a semiconductor

memory (col.15, lines 20-22), and the data size is a size corresponding to an integral

number of times of an erasing block size of the recording medium (col.7, lines 32-35).

Regarding claim 5, Rich teaches the recording medium is a recording medium of a card type that can be freely attached or removed to the data accessing apparatus (col.15, lines 20-27).

Regarding claim 6, Rich teaches a data accessing apparatus for writing/reading data to a recording medium in which the data is written per data size that can be increased and decreased stepwise (it is taught as varying number of data streams col.4, lines 10 and col.7, lines 25-39), a data transfer efficiency at writing the data is variable depending on the data size (col.7,lines 35-49), and a parameter showing the data transfer efficiency at writing the data per the data size is recorded (col.7, lines 25-52), comprising:

a device to transmitting an information showing the necessary data transfer efficiency required in the data to be written/read by the data accessing apparatus (it is taught as issuing a transfer operation such as a read/write command specified in the selected access pattern to the disk drive and each data access pattern can be specified by parameters); and

a device to set the data size at writing the data based on an information showing an optimum data size transmitted by the recording medium which received the information showing the required data transfer efficiency so as to write/read the data to the recording medium based on the set data size (it is taught as determining a required

size value for a buffer per data transfer rate whereby the disk drive can properly stream data according to each data transfer rate via the corresponding buffer and an adjustable virtual buffer size is selected for according transfer rate per access pattern; col.5, lines 36 to col.6, lines 22).

Regarding claim 7, Rich teaches the data is written/read per the data size that can be increased and decreased stepwise by the data access apparatus of claim 6, comprising: a memory unit in which the parameter is recorded (it is taught as log the parameter results in a log file); and a device for receiving the information to show the data transfer efficiency transmitted by the data accessing apparatus and selecting the optimum data size at writing the data by collating the information showing the required data size transfer efficiency with the parameter memorized in the memory unit; and a unit to transmit an information on the selected optimum data size to the data accessing apparatus (col.7, lines 53-60 and col.9, lines 51-67).

Regarding claim 8, Rich teaches the parameter is a table in which the data size and an information on a length of time required for writing/reading the data to the recording medium based on the data size are corresponded each other(col.10, lines 14-26 and col.11, lines 23-55).

Regarding claim 9, Rich teaches the recording medium is a semiconductor memory (col.15, lines 20-22), and the data size is a size corresponding to an integral

times of an erasing block size of the recording medium (col.7, lines 32-35).

Regarding claim 10, Rich teaches the recording medium is a recording medium of a card type that can be freely attached or removed to the data accessing apparatus (col.15, lines 20-27).

Regarding claim 11, Rich teaches a data accessing method wherein the data accessing apparatus writes/reads data to a recording medium in which the data is written per data size that can be increased and decreased stepwise (it is taught as varying number of data streams col.4, lines 10 and col.7, lines 25-39) and a data transfer efficiency at writing the data is variable in accordance with the data size (col.7, lines 35-49), comprising:

a step in which a parameter showing the data transfer efficiency is previously recorded into the recording medium at writing the data into the recording medium per the data size (col.8, lines 35-50);

a step in which the data accessing apparatus transmits a parameter acquisition command to the recording medium at writing/reading the data (it is taught as issuing a transfer operation such as a read/write command specified in the selected access pattern to the disk drive and each data access pattern can be specified by parameters);

a step in which the recording medium that received the parameter acquisition command transmits the parameter to the data accessing apparatus (col.7, lines 53-56);

a step in which the data accessing apparatus that received the parameter

collates the parameter with the data transfer efficiency required in the data to be

written/read by the data accessing apparatus to thereby set an optimum data size at

writing the data (it is taught as determining a required size value for a buffer per data

transfer rate whereby the disk drive can properly stream data according to each data

transfer rate via the corresponding buffer and an adjustable virtual buffer size is

selected for according transfer rate per access pattern; col.5, lines 36 to col.6, lines 22);

and

a step in which the data accessing apparatus writes/reads the data between itself

and the recording medium based on the set optimum data size (col.5, lines 36-58).

Regarding claim 12, Rich teaches the parameter is a table in which the data size

and an information on a length of time required for writing/reading the data to the

recording medium based on the data size are corresponded each other (col.10, lines

14-26 and col.11, lines 23-55).

Regarding claim 13, Rich teaches the recording medium is a semiconductor

memory (col.15, lines 20-22), and the data size is a size corresponding to an integral

times of an erasing block size of the recording medium (col.7, lines 32-35).

Regarding claim 14, Rich teaches the recording medium is a recording medium of

a card type that can be freely attached or removed to the data accessing apparatus

(col.15, lines 20-27).

Regarding claim 15, Rich teaches a data accessing method wherein the data

accessing apparatus writes/reads data to a recording medium in which the data is

written per data size that can be increased and decreased stepwise (it is taught as

varying number of data streams col.4, lines 10 and col.7, lines 25-39) and a data

transfer efficiency at writing the data is variable in accordance with the data

size(col.7,lines 35-49), comprising:

a step in which a parameter showing the data transfer efficiency is previously

recorded into the recording medium at writing the data into the recording medium per

the data size (col.8, lines 35-50);

a step in which the data accessing apparatus transmits an information to show

the data transfer efficiency required in the data to be written/read by the data accessing

apparatus to the recording medium at writing the data (it is taught as issuing a transfer

operation such as a read/write command specified in the selected access pattern to the

disk drive and each data access pattern can be specified by parameters);

a step in which the recording medium that received the information to show the

required data transfer efficiency collates the information concerned with the parameter

to thereby select an optimum data size at writing the data apparatus (col.7, lines 53-56);

a step in which the recording medium transmits an information to show the

selected optimum data size to the data accessing apparatus (col.5, lines 36 to col.6,

lines 22); and

a step in which the data accessing apparatus that received the information to

show the optimum data size sets the data size at writing the data based on the

information showing the optimum data size to thereby write/read the data between itself

and the recording medium (col.5, lines 36-58)..

Regarding claim 16, Rich teaches the parameter is a table in which the data size

and an information on a length of time required to write/read the data to the recording

medium based on the data size are corresponded each other (col.10, lines 14-26 and

col.11, lines 23-55).

Regarding claim 17, Rich teaches the recording medium is a semiconductor

memory (col.15, lines 20-22), and the data size is a size corresponding to an integral

times of an erasing block size of the recording medium (col.7, lines 32-35).

Regarding claim 18, Rich teaches the recording medium is a recording medium of

a card type that can be freely attached or removed to the data accessing apparatus

(col.15, lines 20-27).

When responding to the office action, Applicant is advised to clearly point out the

patentable novelty which he or she thinks the claims present in view of the state of the

art disclosed by the references cited or the objections made. He or she must also show

how the amendments avoid such references or objections. See 37 C.F.R. 1.111 (c).

When responding to the office action, Applicants are advised to provide the

examiner with the line numbers and page numbers in the application and/or references

cited to assist examiner to locate the appropriate paragraphs.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Jasmine Song whose telephone number is 571-272-

4213. The examiner can normally be reached on 7:30-5:30 (first Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Hyung Sough can be reached on 571-272-6799. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jasmine Song/

Primary Examiner, Art Unit 2188